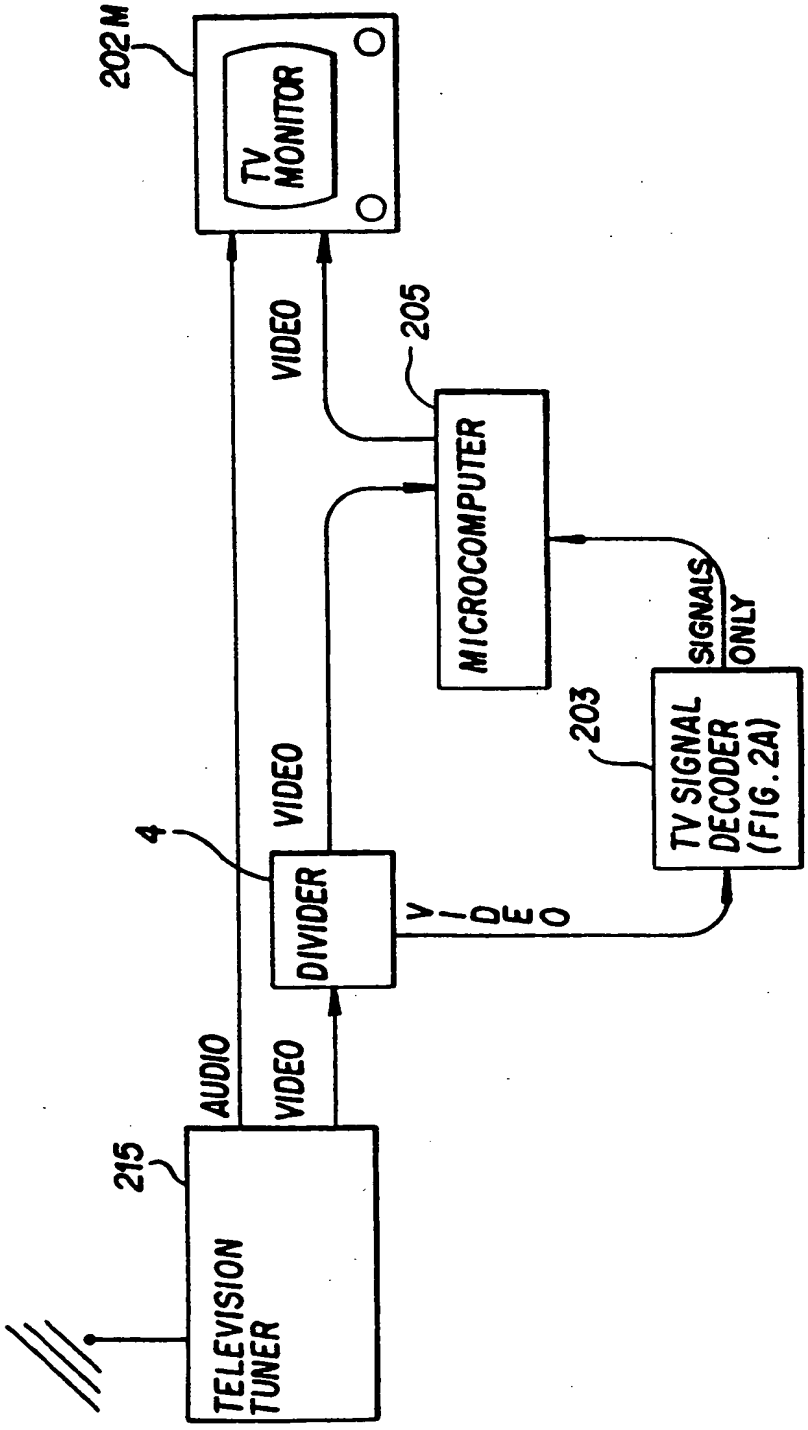
202M
TV MONITOR
VIDEO
205
MICROCOMPUTER
SIGNALS ONLY
203
TV SIGNAL DECODER (FIG. 2A)
4
VIDEO
DIVIDER
VIDEO
AUDIO
215
TELEVISION TUNER

FIG. 1

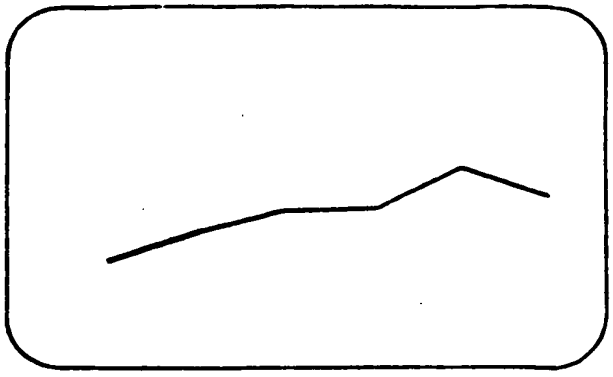

FIG. 1A

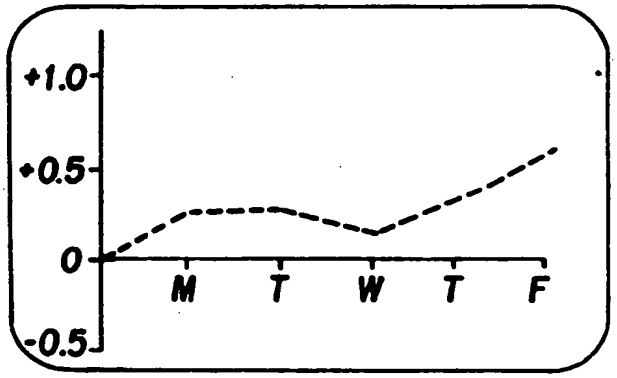

FIG. 1B

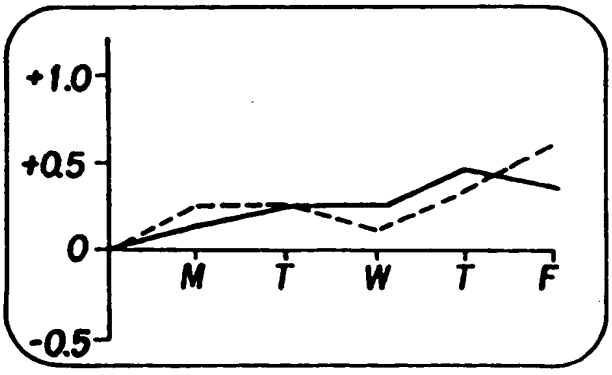

FIG. 1C

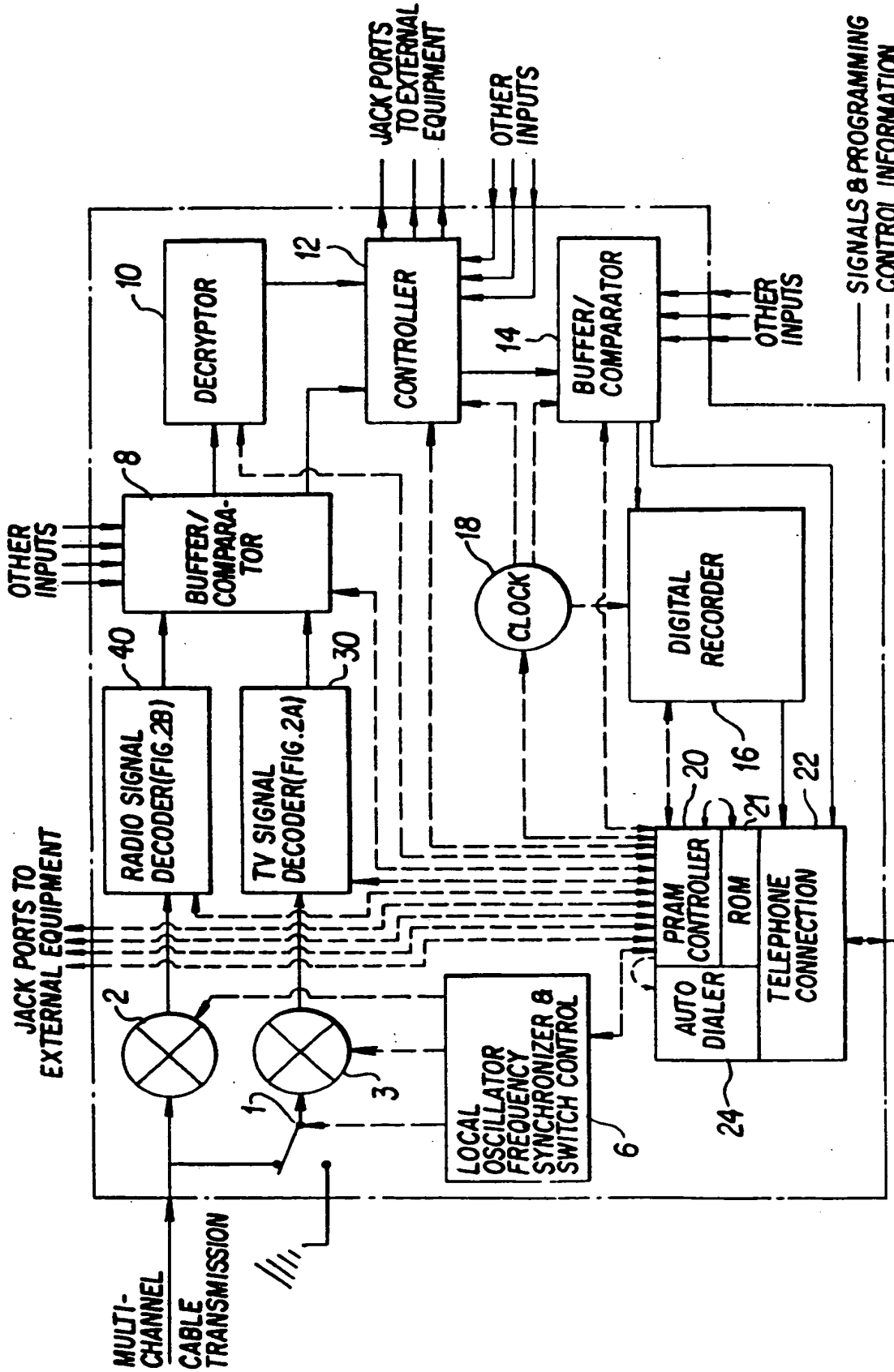
JACK PORTS TO EXTERNAL EQUIPMENT
OTHER INPUTS
SIGNALS & PROGRAMMING
CONTROL INFORMATION
DECRYPTOR
CONTROLLER
BUFFER/ COMPARATOR
OTHER INPUTS
BUFFER/ COMPARA-TOR
CLOCK
DIGITAL RECORDER
RADIO SIGNAL DECODER(FIG.2B)
TV SIGNAL DECODER(FIG.2A)
JACK PORTS TO EXTERNAL EQUIPMENT
PRAM CONTROLLER
ROM
AUTO DIALER
TELEPHONE CONNECTION
TELEPHONE OR OTHER DATA TRANSFER NETWORK
LOCAL OSCILLATOR FREQUENCY SYNCHRONIZER & SWITCH CONTROL
MULTI-CHANNEL CABLE TRANSMISSION
10
12
14
8
18
40
30
20
16
21
22
2
3
1
6
24

FIG. 2

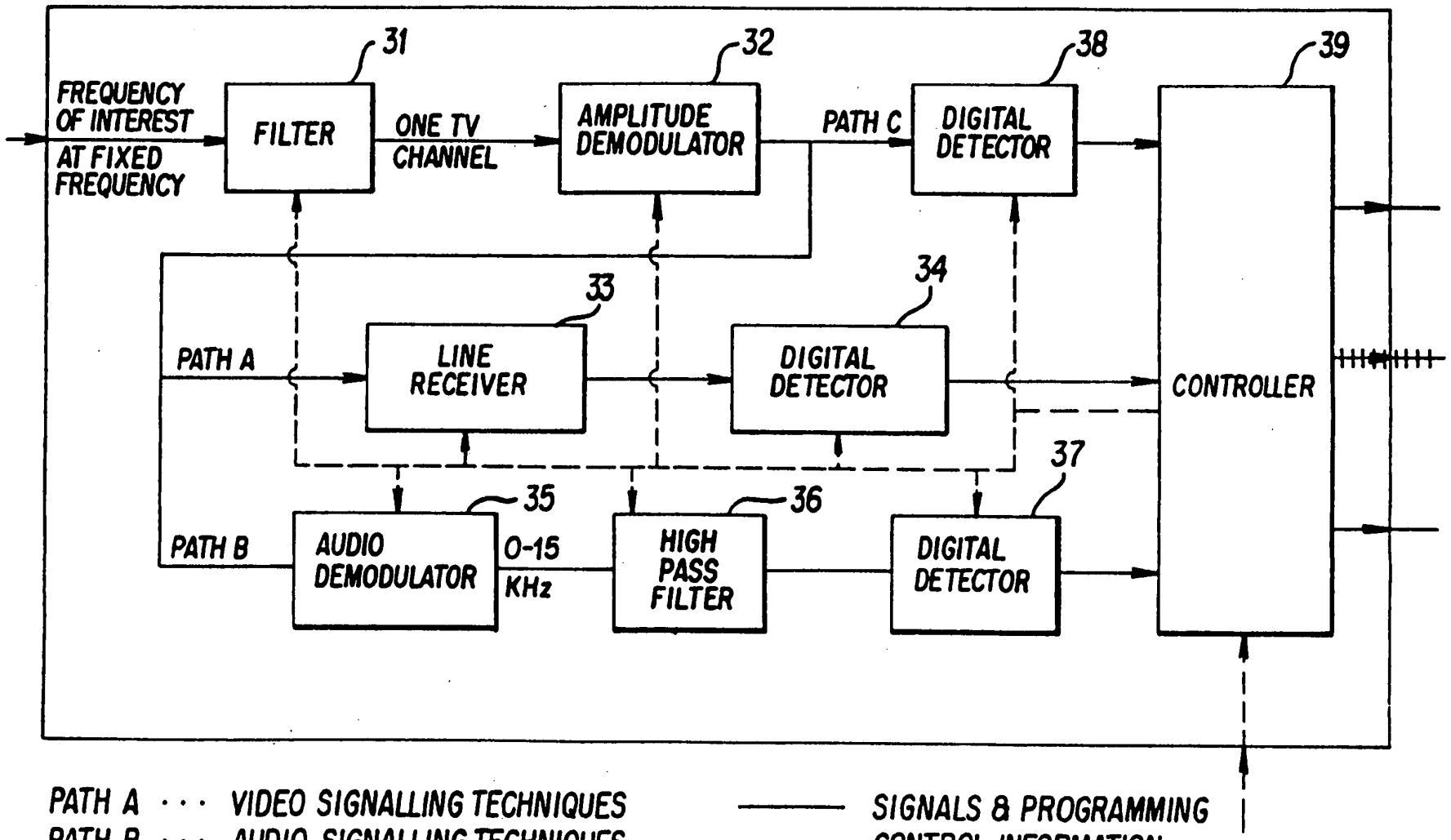
FREQUENCY OF INTEREST AT FIXED FREQUENCY
31
FILTER
ONE TV CHANNEL
32
AMPLITUDE DEMODULATOR
PATH C
38
DIGITAL DETECTOR
39
CONTROLLER
PATH A
33
LINE RECEIVER
34
DIGITAL DETECTOR
PATH B
35
AUDIO DEMODULATOR
0-15 KHz
36
HIGH PASS FILTER
37
DIGITAL DETECTOR
PATH A ··· VIDEO SIGNALLING TECHNIQUES
PATH B ··· AUDIO SIGNALLING TECHNIQUES
PATH C ··· SEPARATE SIGNALLING TECHNIQUES
SIGNALS & PROGRAMMING
CONTROL INFORMATION
MONITOR INFORMATION

FIG. 2A

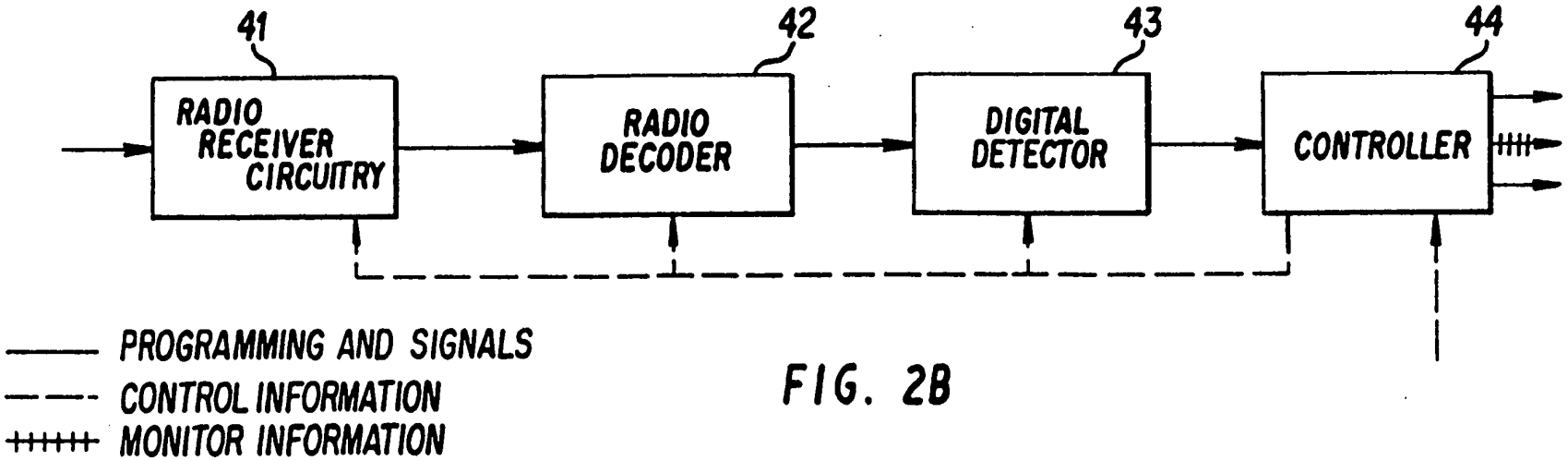

FIG. 2B

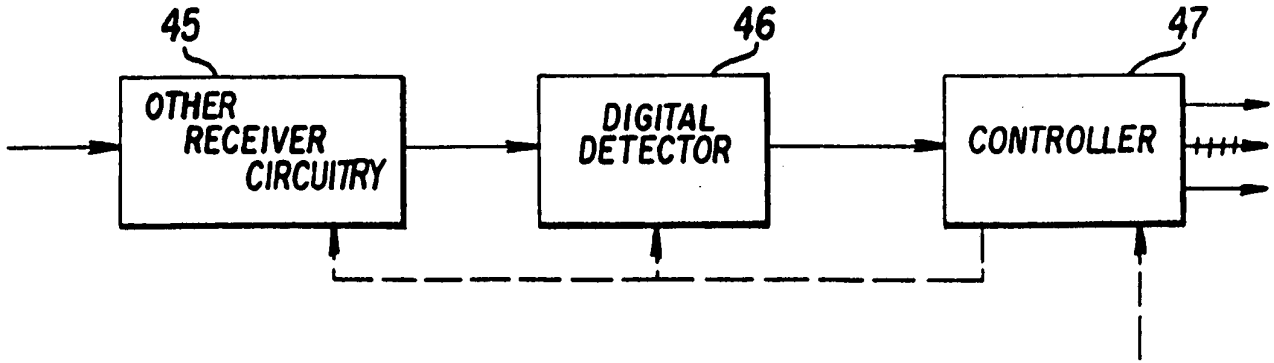

FIG. 2C

09/647,427

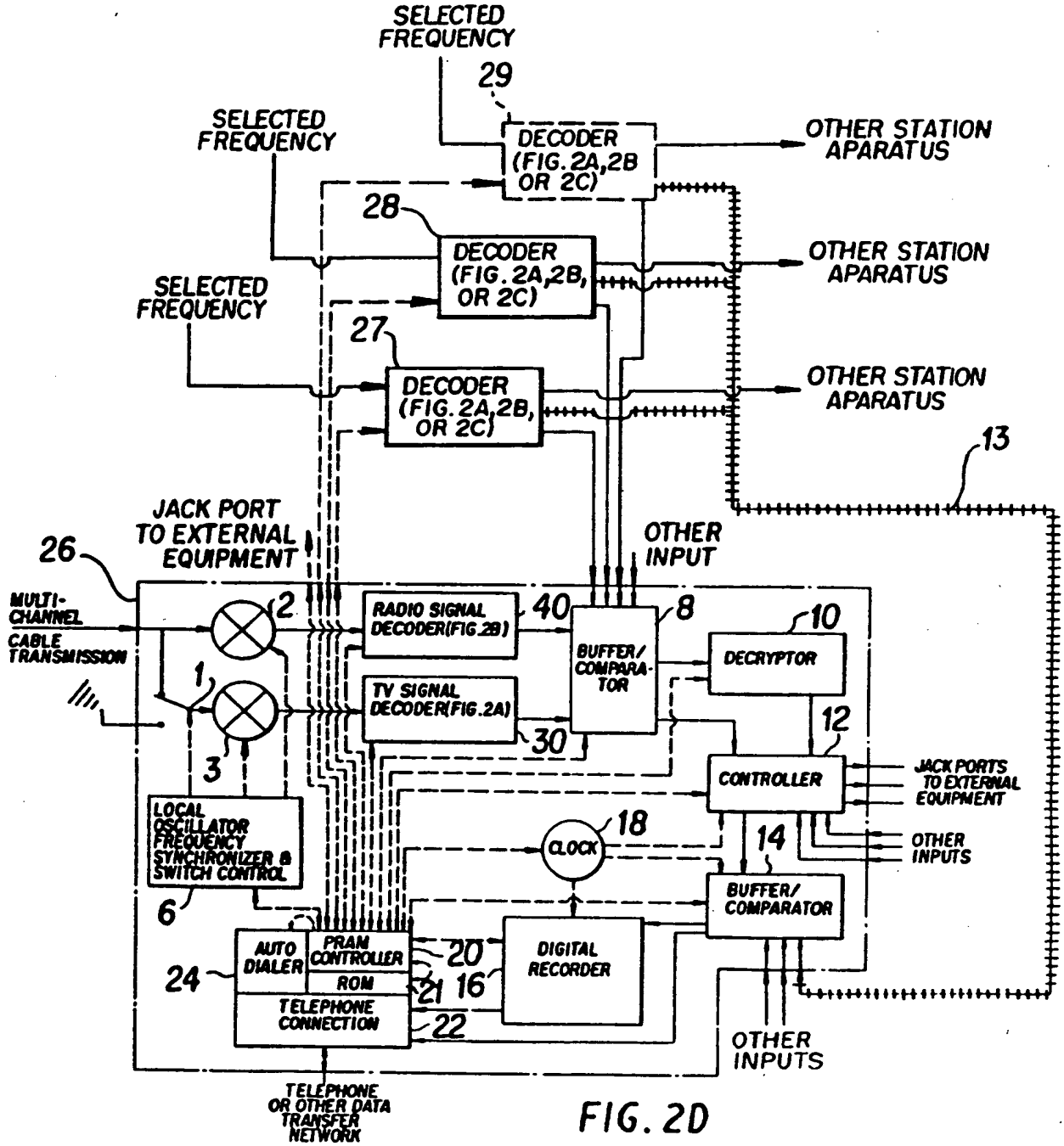

FIG. 2D

SIGNALS & PROGRAMMING
CONTROL INFORMATION
MONITOR INFORMATION

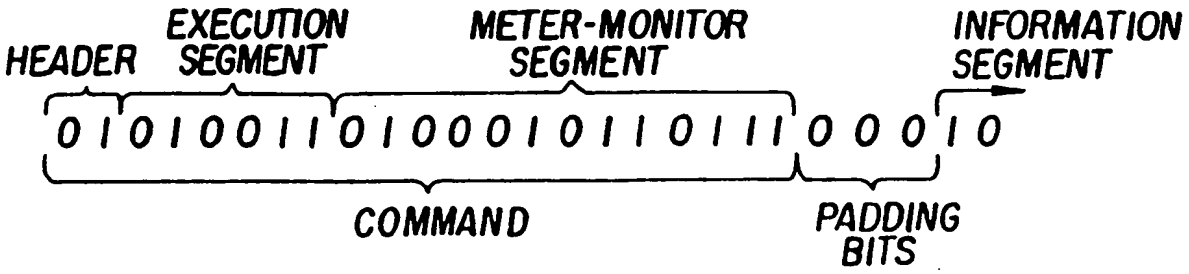

FIG. 2E

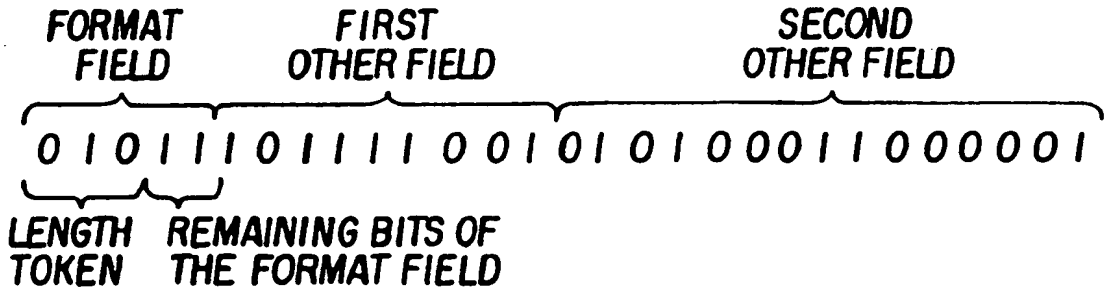

FIG. 2F

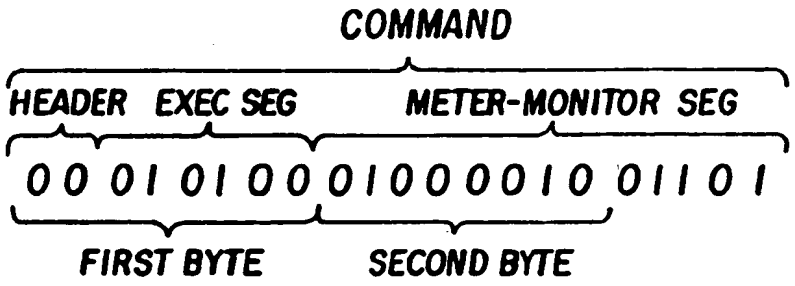

FIG. 2G

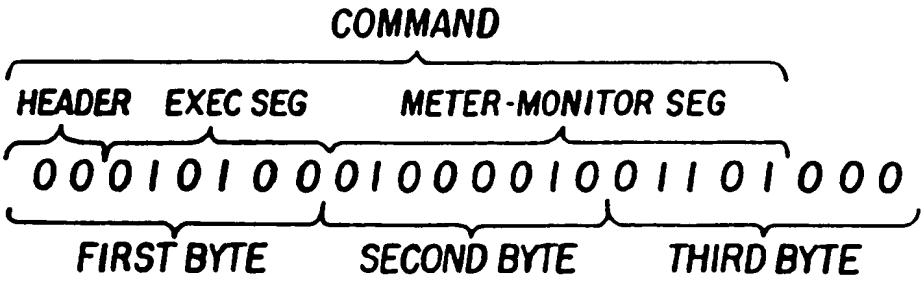

FIG. 2H

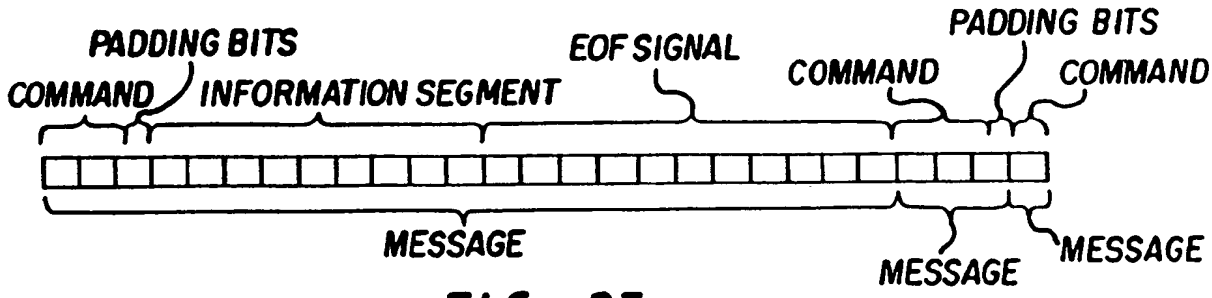

FIG. 2I

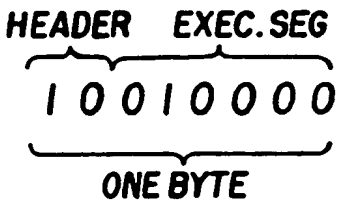

FIG. 2J

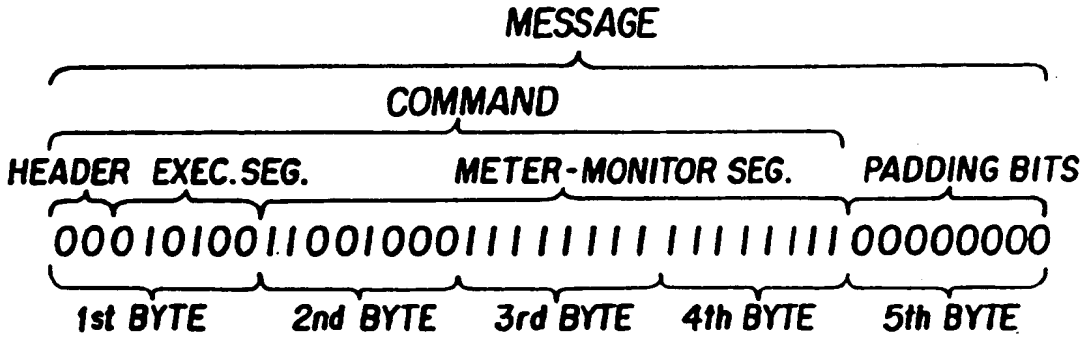

FIG. 2K

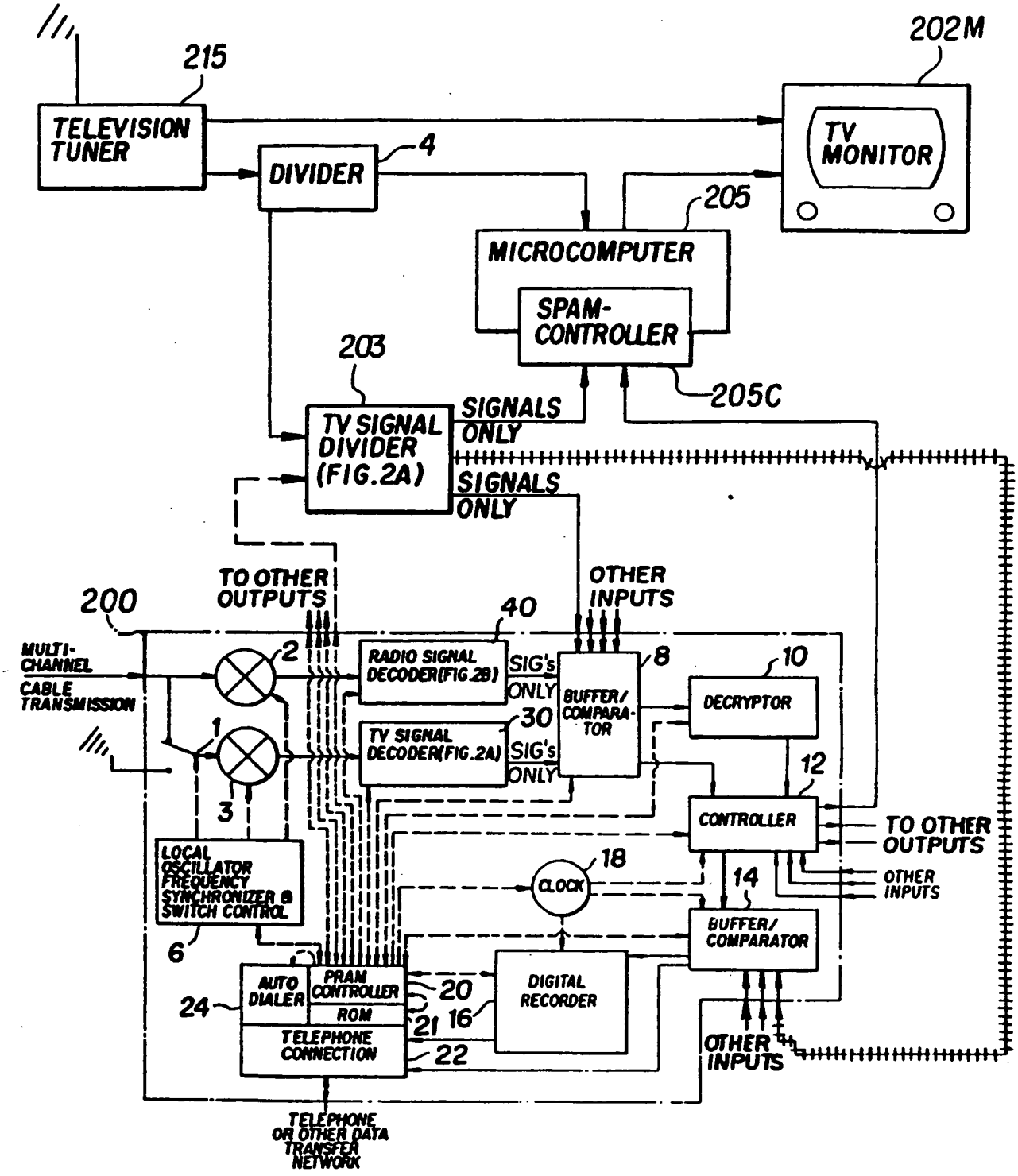
215
TELEVISION TUNER
DIVIDER
4
202M
TV MONITOR
205
MICROCOMPUTER
SPAM-CONTROLLER
205C
203
TV SIGNAL DIVIDER (FIG.2A)
SIGNALS ONLY
SIGNALS ONLY
TO OTHER OUTPUTS
OTHER INPUTS
200
40
MULTI-CHANNEL CABLE TRANSMISSION
2
1
3
RADIO SIGNAL DECODER(FIG.2B)
TV SIGNAL DECODER(FIG.2A)
SIG's ONLY
SIG's ONLY
30
8
BUFFER/ COMPARA-TOR
10
DECRYPTOR
12
CONTROLLER
TO OTHER OUTPUTS
OTHER INPUTS
18
CLOCK
14
BUFFER/ COMPARATOR
LOCAL OSCILLATOR FREQUENCY SYNCHRONIZER & SWITCH CONTROL
6
AUTO DIALER
PRAM CONTROLLER
ROM
TELEPHONE CONNECTION
24
20
21
16
22
DIGITAL RECORDER
OTHER INPUTS
TELEPHONE OR OTHER DATA TRANSFER NETWORK
SIGNALS & PROGRAMMING
CONTROL INFORMATION

FIG. 3

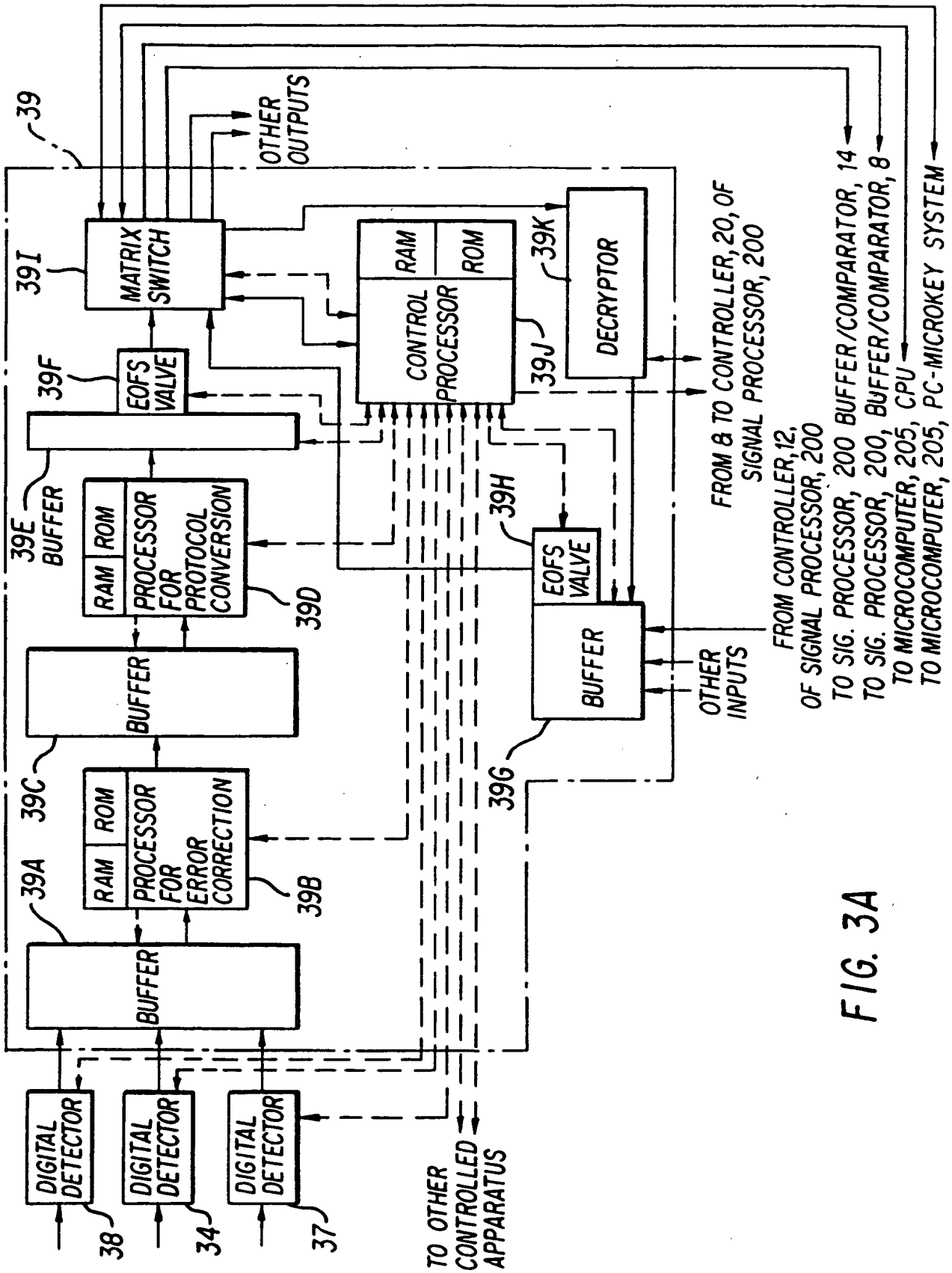
39
OTHER OUTPUTS
39I
MATRIX SWITCH
39F
EOFS VALVE
39E BUFFER
RAM
ROM
PROCESSOR FOR PROTOCOL CONVERSION
39D
BUFFER
39C
RAM
ROM
PROCESSOR FOR ERROR CORRECTION
39B
39A
BUFFER
DIGITAL DETECTOR
38
DIGITAL DETECTOR
34
DIGITAL DETECTOR
37
TO OTHER CONTROLLED APPARATUS
RAM
ROM
CONTROL PROCESSOR
39J
39K
DECRYPTOR
39H
EOFS VALVE
BUFFER
39G
OTHER INPUTS
FROM CONTROLLER,12, OF SIGNAL PROCESSOR, 200
FROM & TO CONTROLLER, 20, OF SIGNAL PROCESSOR, 200
TO SIG. PROCESSOR, 200 BUFFER/COMPARATOR, 14
TO SIG. PROCESSOR, 200, BUFFER/COMPARATOR, 8
TO MICROCOMPUTER, 205, CPU
TO MICROCOMPUTER, 205, PC-MICROKEY SYSTEM

FIG. 3A

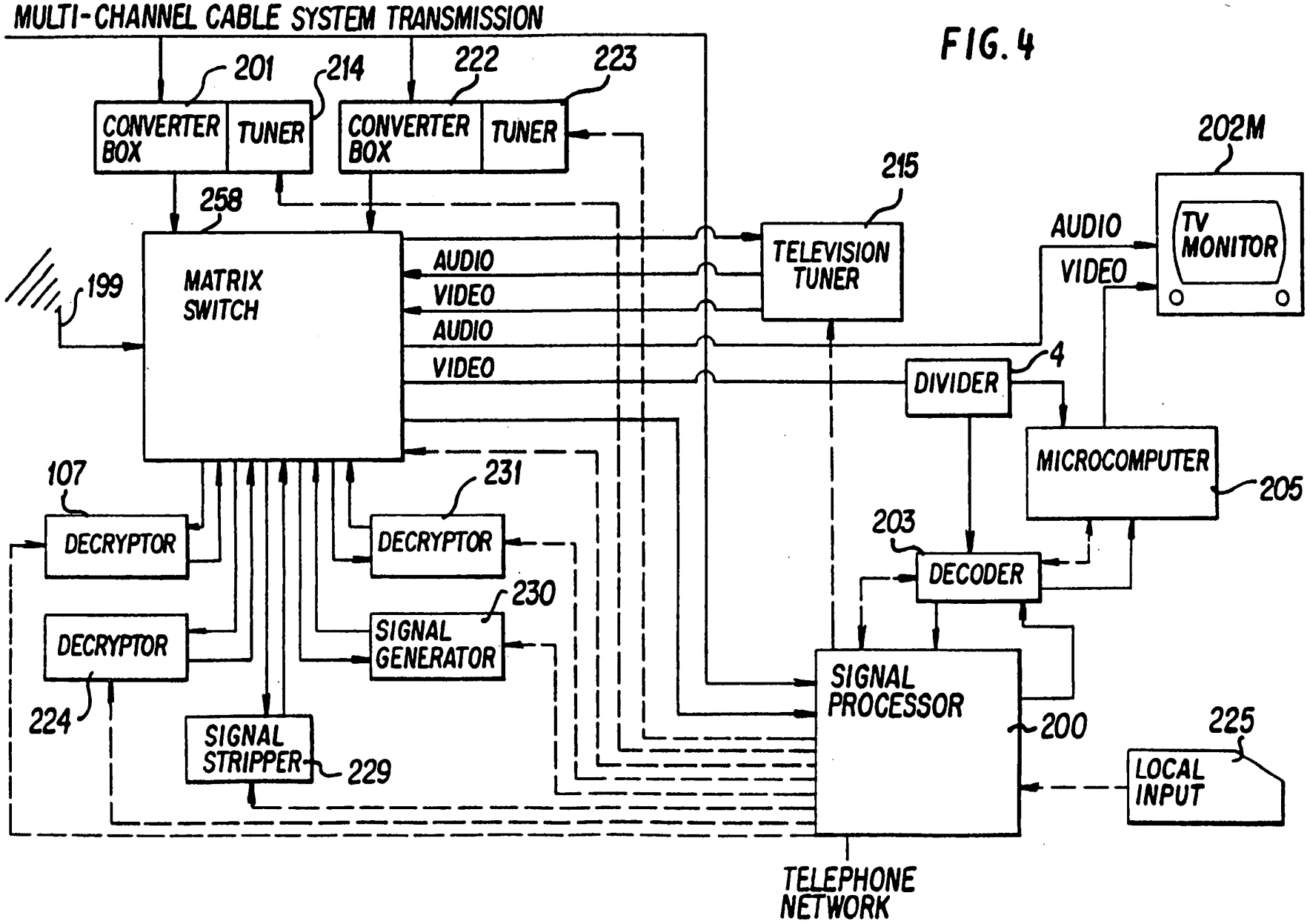

FIG. 4

4,477,827

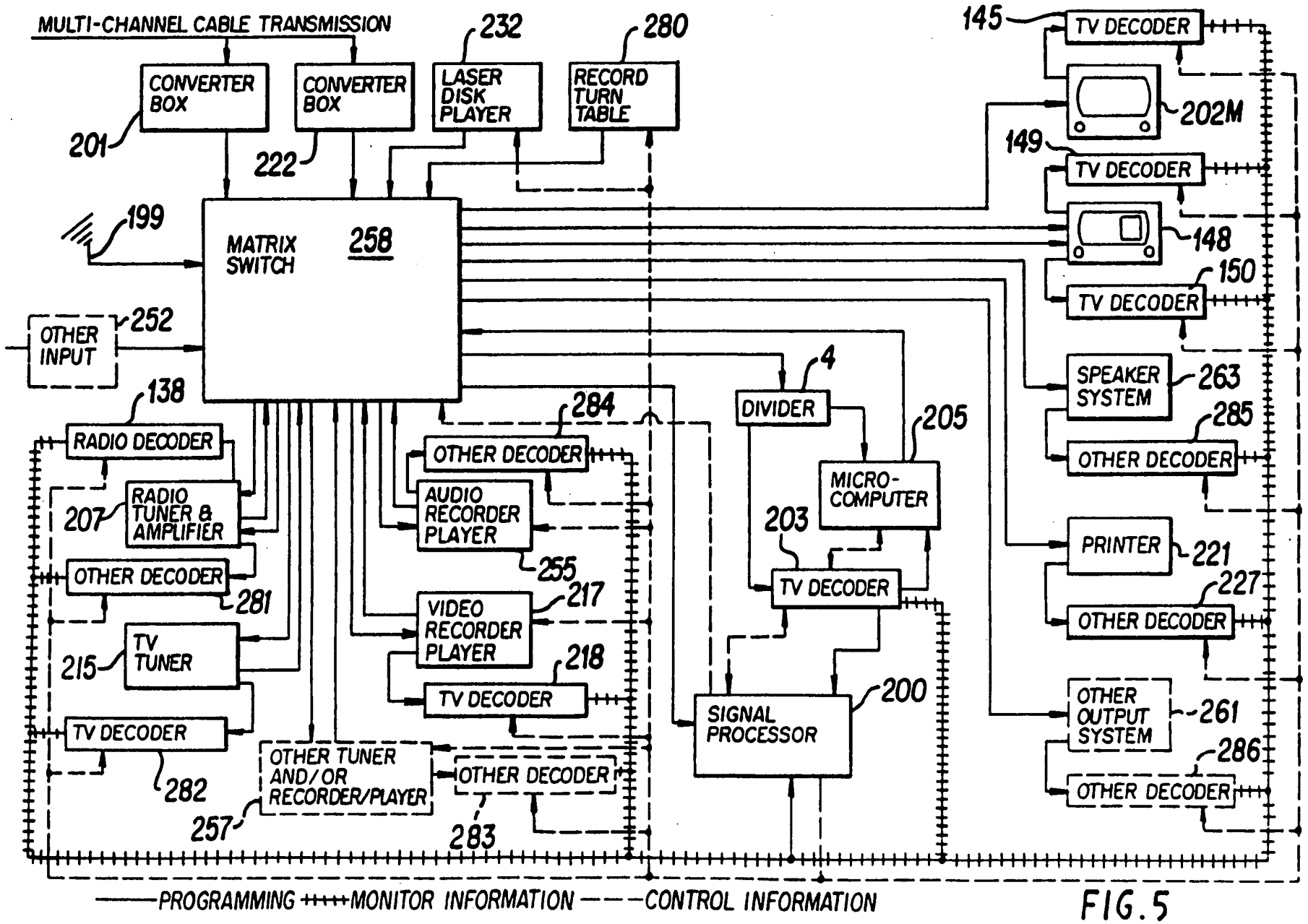
MULTI-CHANNEL CABLE TRANSMISSION
CONVERTER BOX
CONVERTER BOX
LASER DISK PLAYER
RECORD TURN TABLE
201
222
232
280
199
MATRIX SWITCH
258
OTHER INPUT
252
138
RADIO DECODER
207
RADIO TUNER & AMPLIFIER
OTHER DECODER
281
215
TV TUNER
TV DECODER
282
OTHER TUNER AND/OR RECORDER/PLAYER
257
OTHER DECODER
283
284
OTHER DECODER
AUDIO RECORDER PLAYER
255
VIDEO RECORDER PLAYER
217
218
TV DECODER
4
DIVIDER
205
MICRO-COMPUTER
203
TV DECODER
SIGNAL PROCESSOR
200
145
TV DECODER
202M
149
TV DECODER
148
150
TV DECODER
SPEAKER SYSTEM
263
285
OTHER DECODER
PRINTER
221
227
OTHER DECODER
OTHER OUTPUT SYSTEM
261
286
OTHER DECODER
PROGRAMMING
MONITOR INFORMATION
CONTROL INFORMATION

FIG. 5

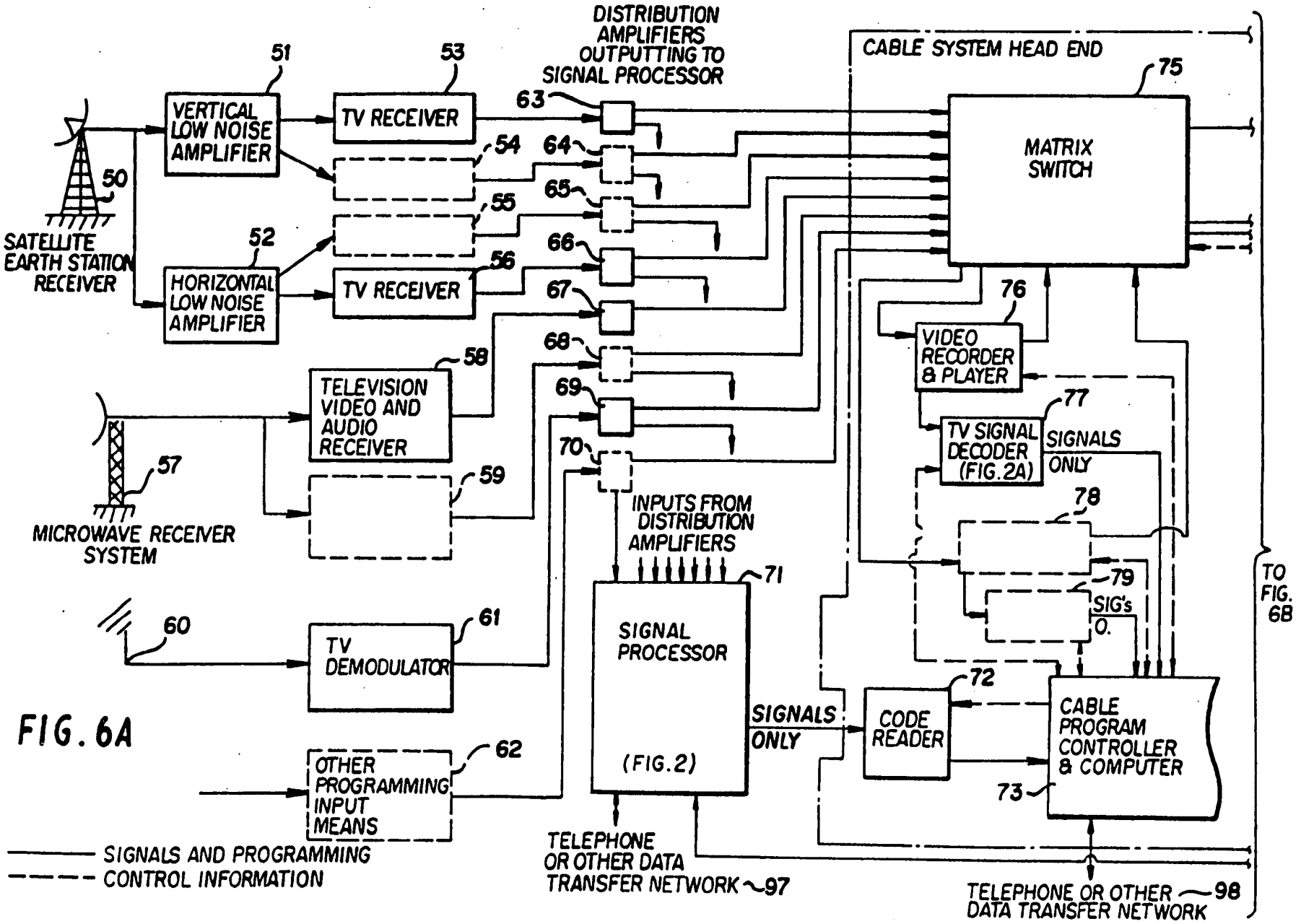

FIG. 6A

4,847,847

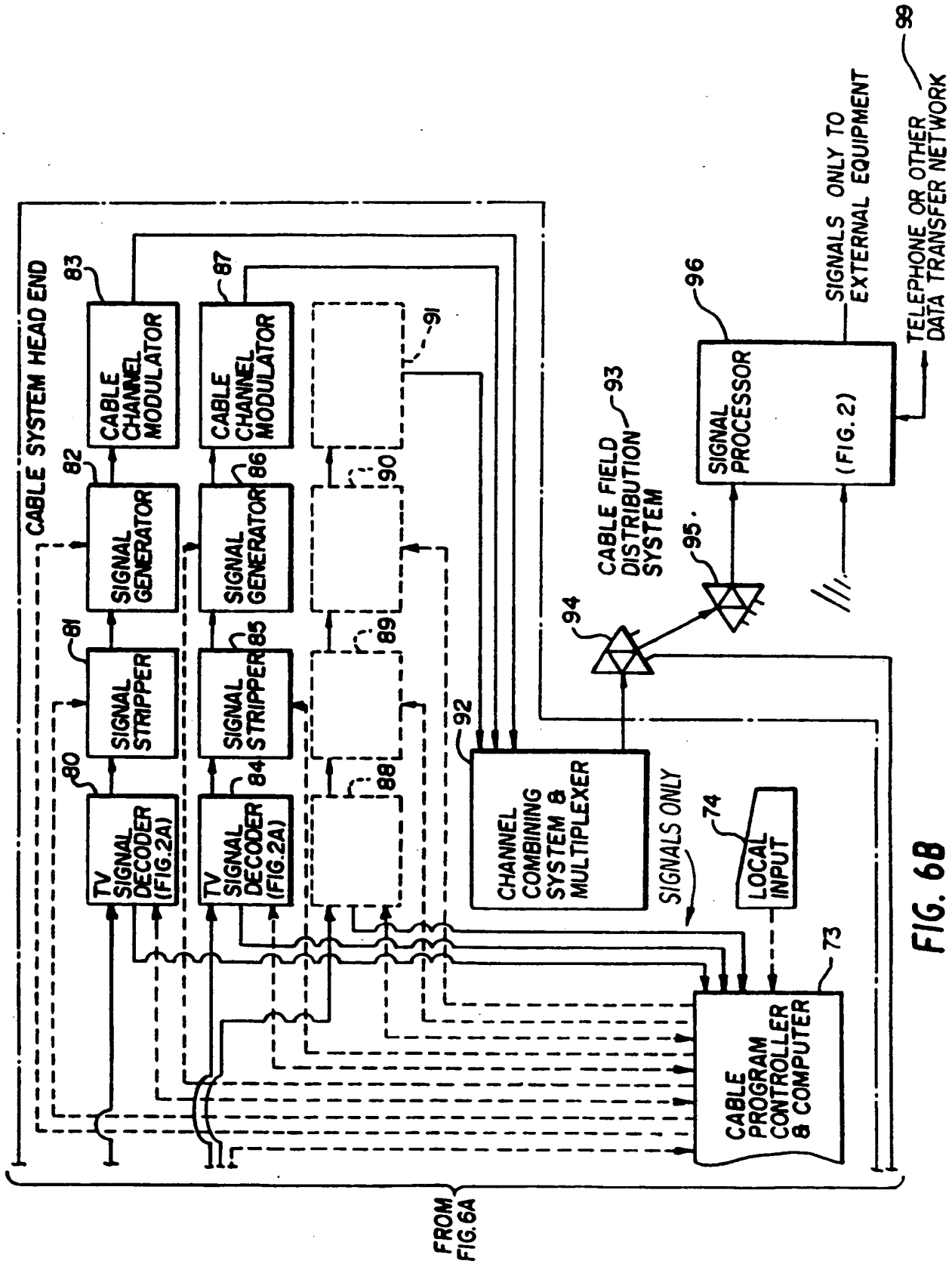
CABLE SYSTEM HEAD END
83
CABLE CHANNEL MODULATOR
87
CABLE CHANNEL MODULATOR
82
SIGNAL GENERATOR
86
SIGNAL GENERATOR
81
SIGNAL STRIPPER
85
SIGNAL STRIPPER
80
TV SIGNAL DECODER (FIG.2A)
84
TV SIGNAL DECODER (FIG.2A)
91
90
89
88
92
CHANNEL COMBINING SYSTEM & MULTIPLEXER
SIGNALS ONLY
74
LOCAL INPUT
73
CABLE PROGRAM CONTROLLER & COMPUTER
94
CABLE FIELD DISTRIBUTION SYSTEM
93
95
96
SIGNAL PROCESSOR
(FIG. 2)
SIGNALS ONLY TO EXTERNAL EQUIPMENT
99
TELEPHONE OR OTHER DATA TRANSFER NETWORK
FROM FIG. 6A

FIG. 6B

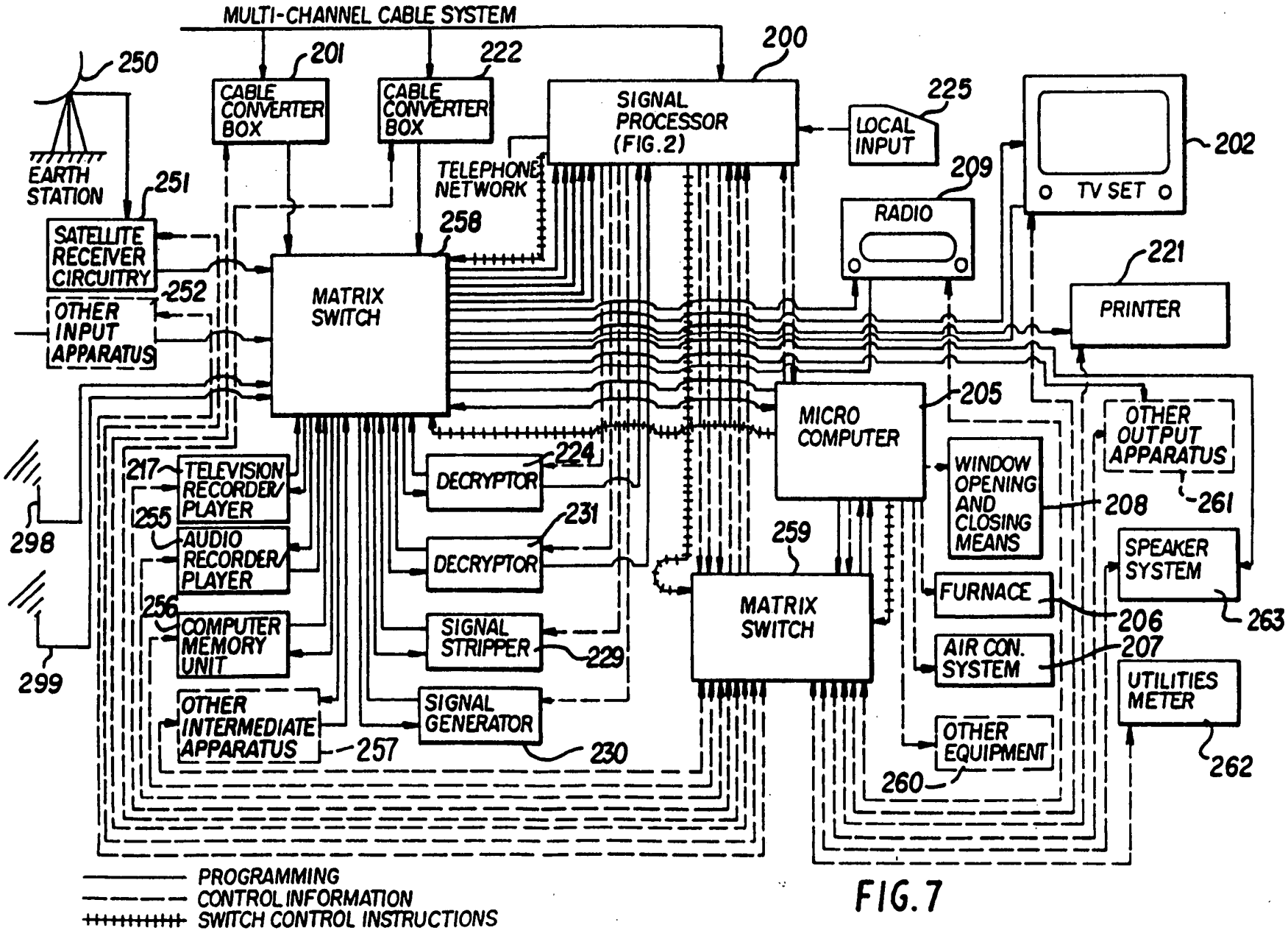

FIG.7

4,847,747

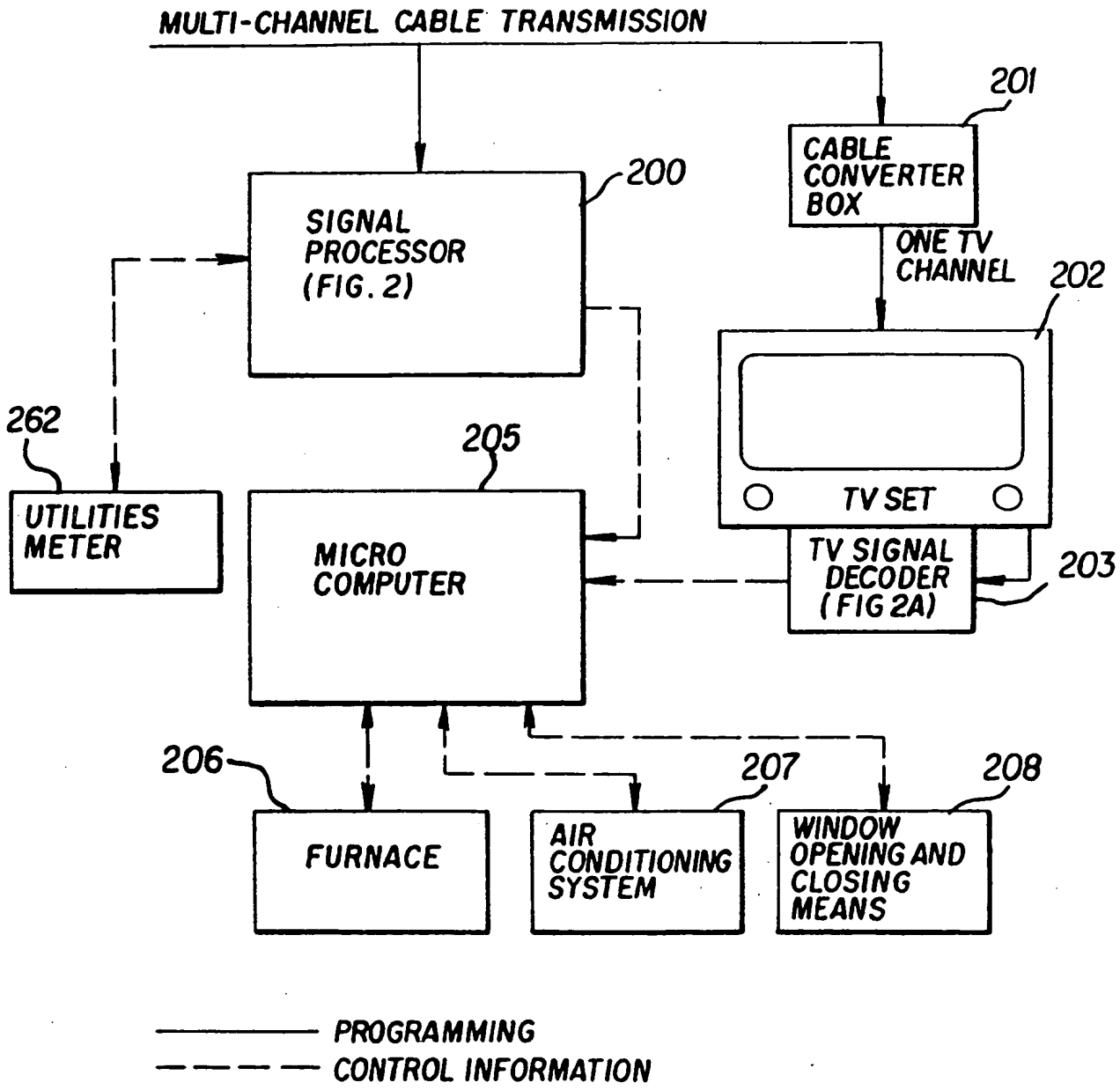
MULTI-CHANNEL CABLE TRANSMISSION
201
CABLE CONVERTER BOX
200
SIGNAL PROCESSOR (FIG. 2)
ONE TV CHANNEL
202
TV SET
262
205
UTILITIES METER
MICRO COMPUTER
TV SIGNAL DECODER (FIG 2A)
203
206
207
208
FURNACE
AIR CONDITIONING SYSTEM
WINDOW OPENING AND CLOSING MEANS
PROGRAMMING
CONTROL INFORMATION

FIG. 7A

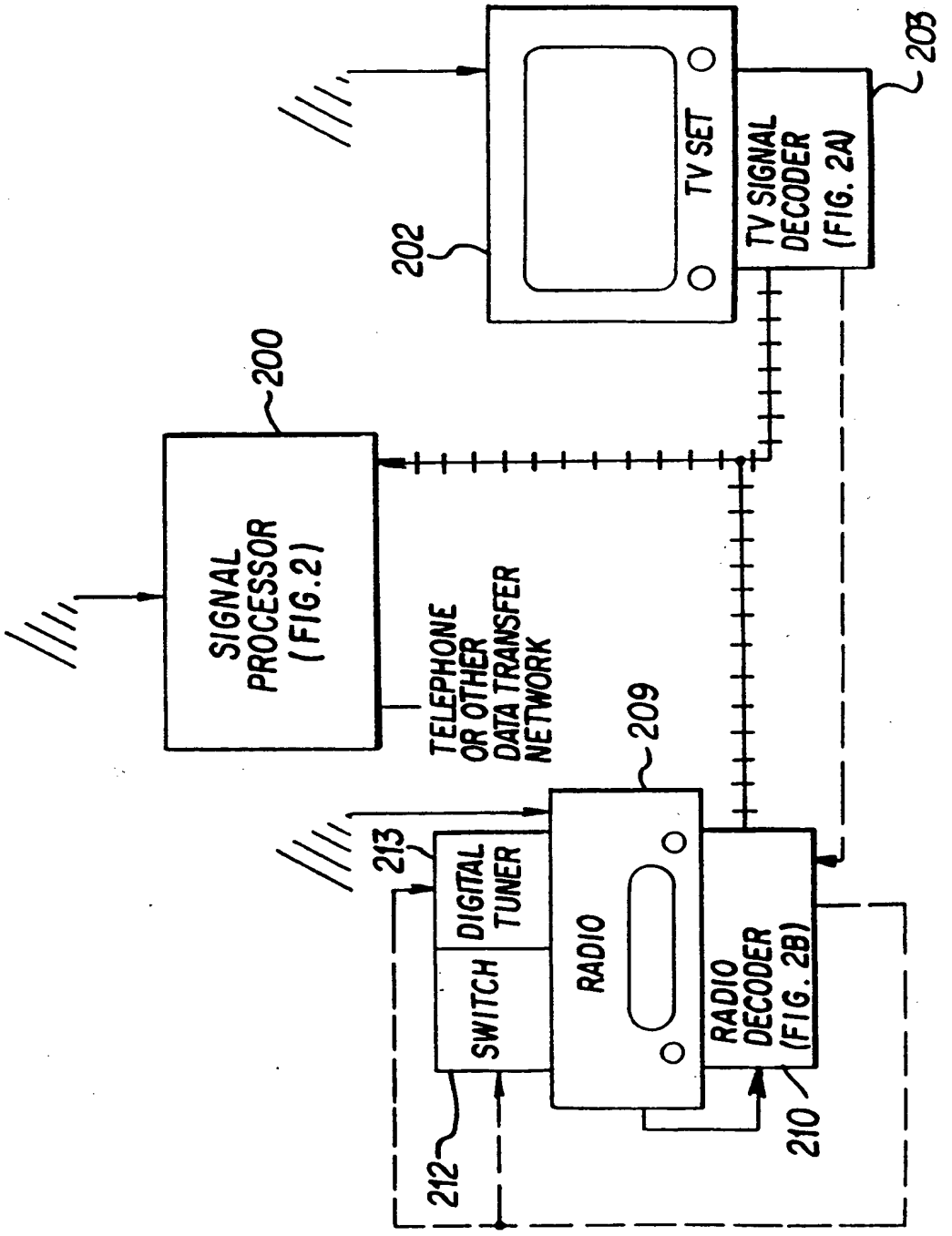
SIGNAL PROCESSOR (FIG. 2)
200
TELEPHONE OR OTHER DATA TRANSFER NETWORK
202
TV SET
TV SIGNAL DECODER (FIG. 2A)
203
209
213
DIGITAL TUNER
SWITCH
RADIO
RADIO DECODER (FIG. 2B)
210
212
PROGRAM
CONTROL INFORMATION
MONITOR INFORMATION

FIG. 7B

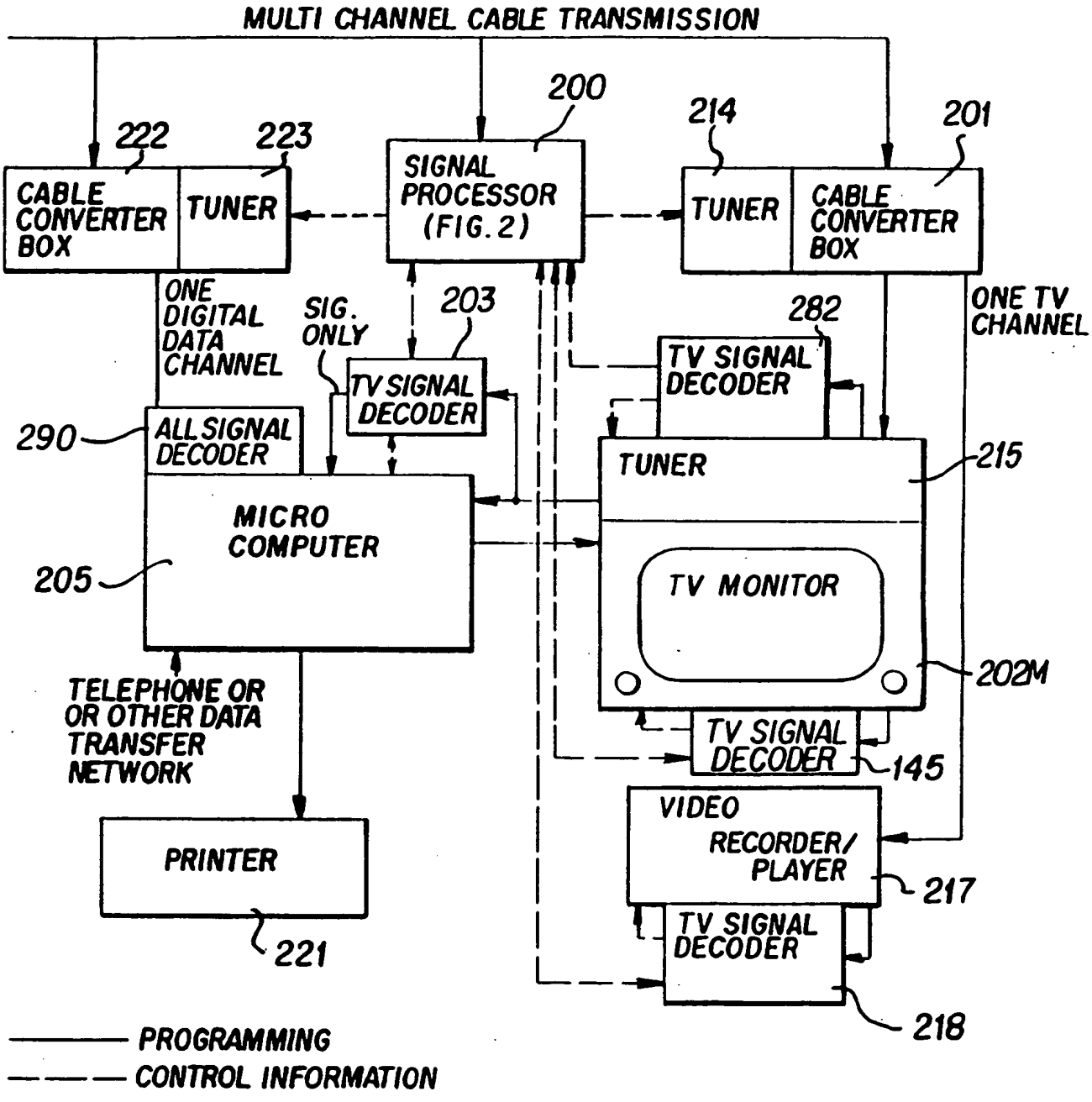
MULTI CHANNEL CABLE TRANSMISSION
200
222
223
214
201
CABLE CONVERTER BOX
TUNER
SIGNAL PROCESSOR (FIG. 2)
TUNER
CABLE CONVERTER BOX
ONE DIGITAL DATA CHANNEL
SIG. ONLY
203
282
ONE TV CHANNEL
TV SIGNAL DECODER
TV SIGNAL DECODER
290
ALL SIGNAL DECODER
TUNER
215
MICRO COMPUTER
205
TV MONITOR
202M
TELEPHONE OR OR OTHER DATA TRANSFER NETWORK
TV SIGNAL DECODER
145
VIDEO RECORDER/ PLAYER
217
PRINTER
221
TV SIGNAL DECODER
218
PROGRAMMING
CONTROL INFORMATION

FIG. 7C

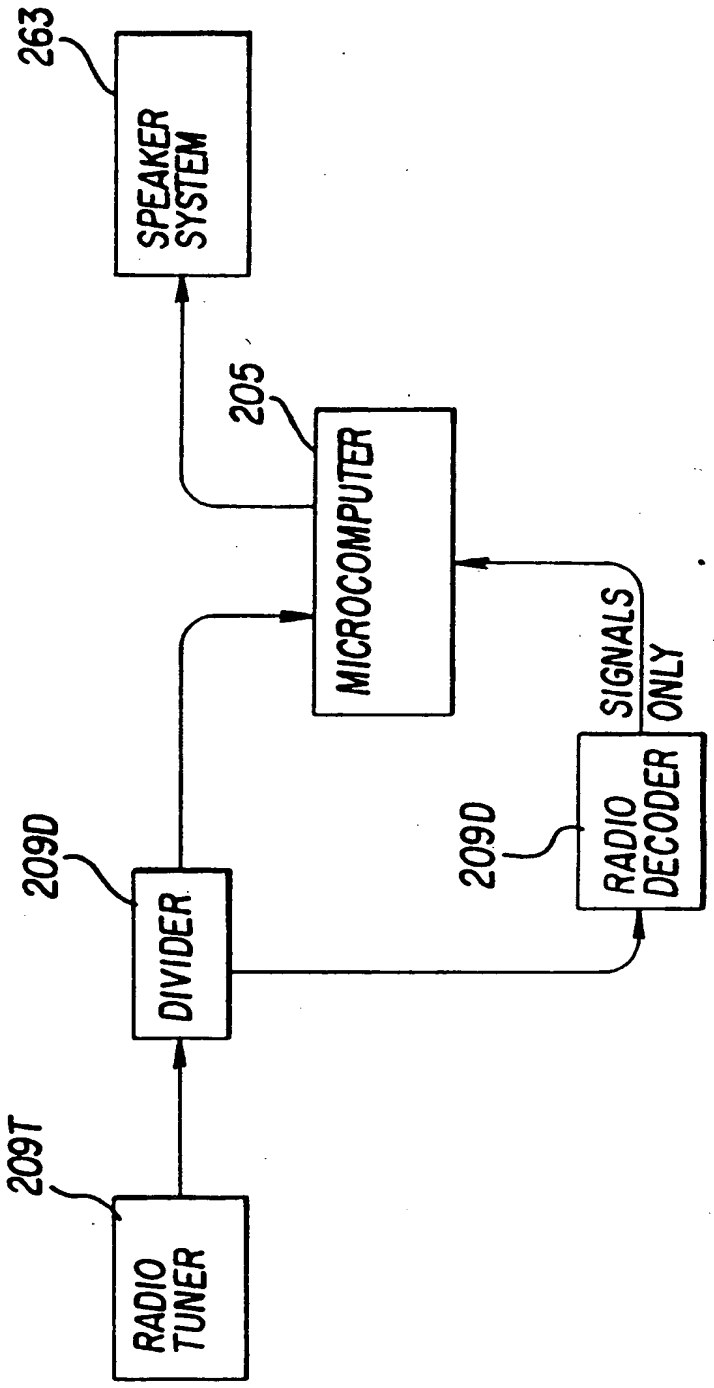
263
SPEAKER SYSTEM
205
MICROCOMPUTER
SIGNALS ONLY
209D
RADIO DECODER
209D
DIVIDER
209T
RADIO TUNER

FIG. 7D

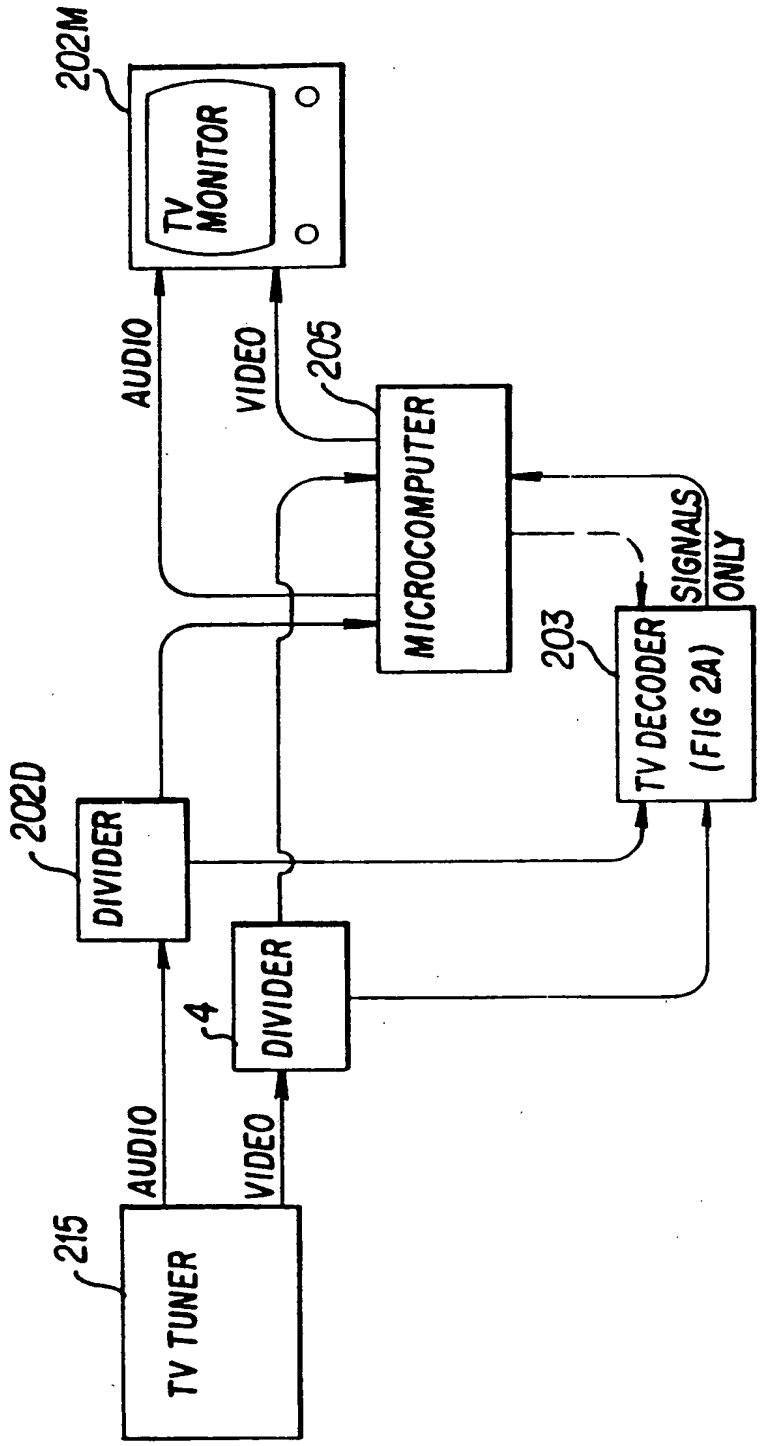
202M
TV MONITOR
AUDIO
VIDEO
205
MICROCOMPUTER
SIGNALS ONLY
203
TV DECODER (FIG 2A)
202D
DIVIDER
4
DIVIDER
AUDIO
VIDEO
215
TV TUNER

FIG. 7E

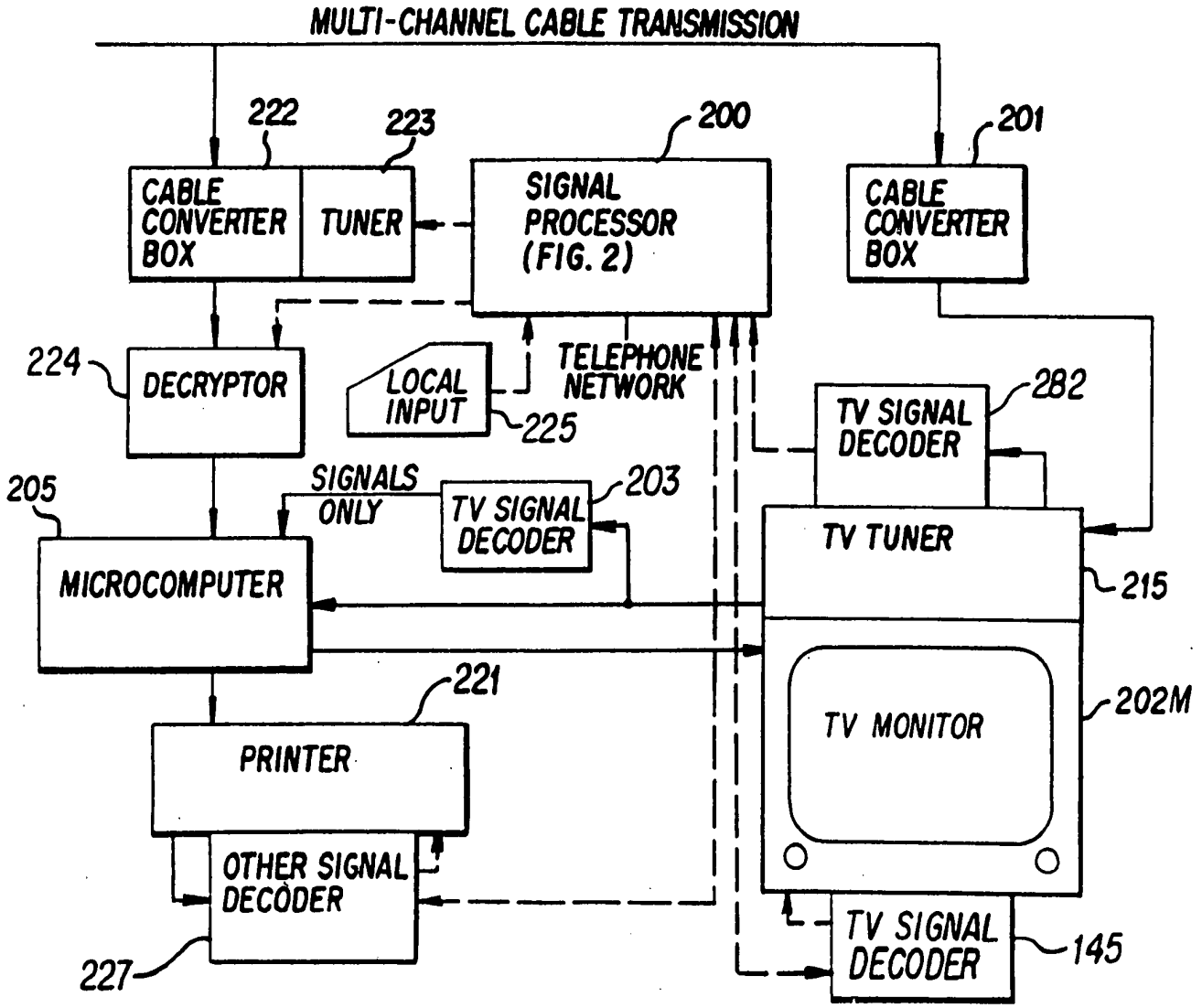
MULTI-CHANNEL CABLE TRANSMISSION
222
223
200
201
CABLE CONVERTER BOX
TUNER
SIGNAL PROCESSOR (FIG. 2)
CABLE CONVERTER BOX
224
DECRYPTOR
LOCAL INPUT
225
TELEPHONE NETWORK
282
TV SIGNAL DECODER
205
SIGNALS ONLY
TV SIGNAL DECODER
203
TV TUNER
MICROCOMPUTER
215
221
PRINTER
TV MONITOR
202M
OTHER SIGNAL DECODER
227
TV SIGNAL DECODER
145
PROGRAMMING
CONTROL INFORMATION

FIG. 7F

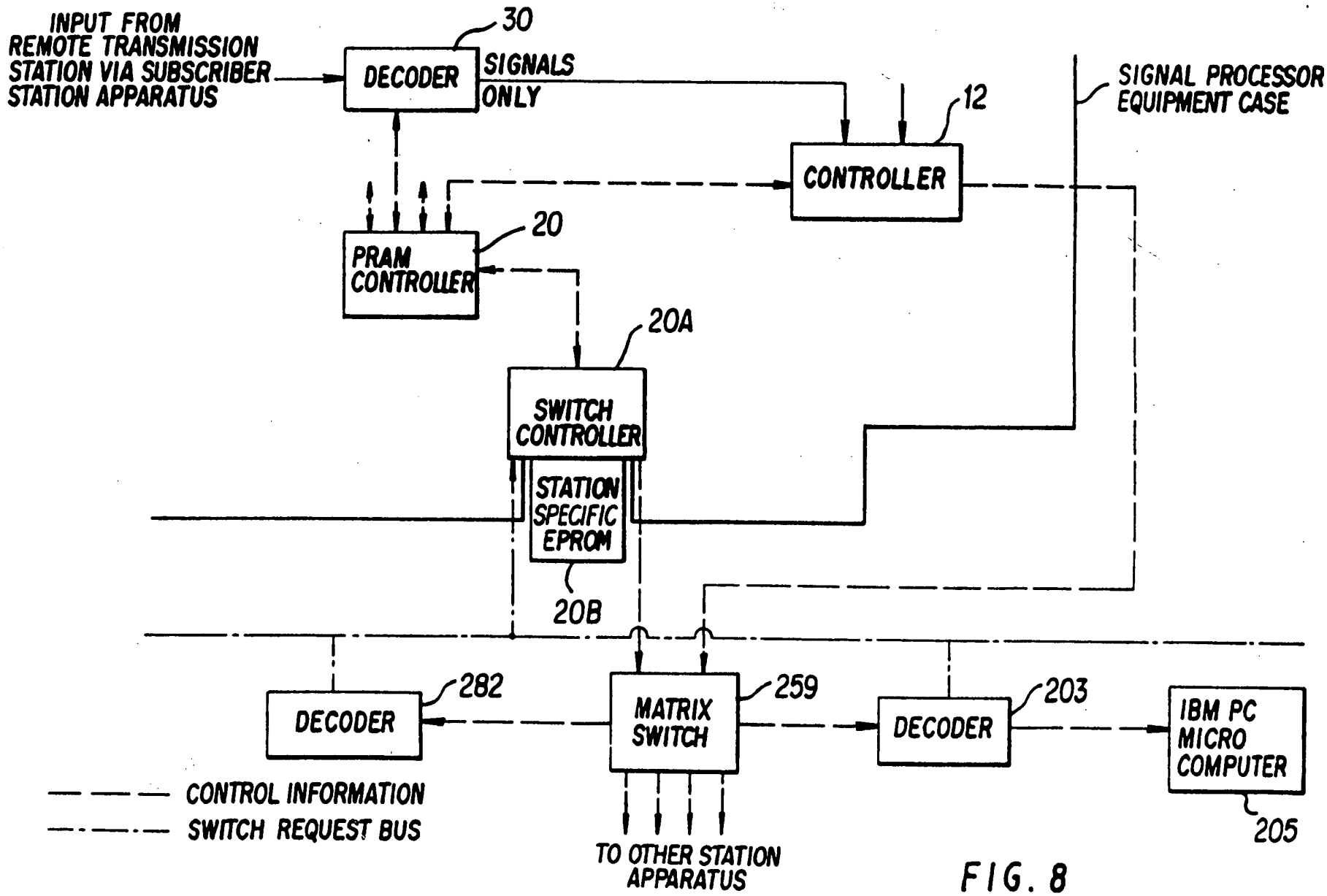

FIG. 8

09/427,427